

THERE IS CLAIMED

1. A superconducting cable conductor, wherein the superconducting cable conductor contains a carrying element, onto which is wound at least one layer comprising two or more superconducting conductor elements, the individual superconducting conductor elements of each layer being arranged next to one another, and the superconducting conductor elements contain a tape-type substrate coated with a superconducting material based on rare earth barium cuprate.
2. The superconducting cable conductor claimed in claim 1, wherein, in the rare earth barium cuprate, the rare earth component is yttrium or contains yttrium.
3. The superconducting cable conductor claimed in claim 1, wherein the rare earth barium cuprate contains at least one further element selected from among Be, Mg, Ca, Sr, Zn, Cd, Sc, Zr, Hf, Pt, Pd, Os, Ir, Ru, Ag, Au, Hg, Tl, Pb, Bi, Ti, S and F.
4. The superconducting cable conductor claimed in claim 1, wherein the layer comprising rare earth barium cuprate has a biaxial orientation.
5. The superconducting cable conductor claimed in claim 1, wherein the substrate used for the conductor element is a substrate which has no lattice matching for the texturing of the layer comprising superconducting material.
6. The superconducting cable conductor claimed in claim 1, wherein the cable

conductor has four to six layers comprising superconducting conductor elements.

7. The superconducting cable conductor claimed in claim 1, wherein an electrically insulating layer is provided at least between two layers comprising superconducting conductor elements.

8. The superconducting cable conductor claimed in claim 1, wherein an insulating layer is provided between carrying element and first layer comprising superconducting conductor elements.

9. The superconducting cable conductor claimed in claim 1, wherein the carrying element is hollow.

10. The superconducting element claimed in claim 1, wherein the carrying element is solid.

11. The superconducting cable conductor claimed in claim 10, wherein the carrying element comprises an electrically conductive material.

12. The superconducting cable conductor claimed in claim 1, wherein the carrying element has an annular corrugation or spiral corrugation.

13. A method for producing a superconducting cable conductor, said method

comprising the steps of:

providing a carrying element, and winding thereon at least one layer comprising two or more superconducting conductor elements, said super conducting elements containing a tape-type substrate coated with a superconducting material based on rare earth barium cuprate; and
arranging next to one another the individual superconducting conductor elements of each layer.